Appl. No. 10/045,515 Amdt. dated March 7, 2005 Reply to Office Action of December 13, 2004

PATENT

55 4/14/05

Amendments to the Specification:

Please replace the paragraph beginning at page \$\beta\$, line 26 with the following amended paragraph:

Figs. 7A -[[C]] <u>7D</u> are diagrams of insulators within [[a]] ground shields according to embodiments of the present invention;

Please replace the paragraph beginning at page 5, line 33 and ending at page 6, line 14 with the following amended paragraph:

One application of the matching circuit of the present invention is to couple an RF source to a gaseous species within a substrate processing chamber to generate a plasma. For a substrate processing system, typical ac energy delivered by an ac power source ranges from radio frequencies to microwave frequencies, approximately 100 kHz to 2.45 GHz. Typical RF energy used for plasma generation is in the range of about 350 kHz to 400 MHz. Thus, the inductive length of the transmission lines of the present invention is in the range of 3000 meters to about 0.12 meters and more typically between about 857 meters to about 0.75 meters. These inductive coupling lengths are quite long with respect to other equipment used in substrate processing. To make the embodiments of the present invention practical for use, the transmission lines and ground shield can be bent into various shapes to reduce their overall dimensions. For example, the transmission lines and ground shield can be bent into spirals, coils, or serpentines as well as other shapes (see FIG. 7D). Such shapes can be less than a meter across in any direction, thus, making the dimensions of the transmission lines practical for use. In embodiments of the present invention discussed below, these dimensional issues are further addressed.